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Serge Bahuchet

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«Historical linguistics and hunter-gatherers populations in global perspective»

**LANGUAGES OF AFRICAN RAINFOREST
« PYGMY » HUNTER-GATHERERS:
LANGUAGE SHIFTS WITHOUT CULTURAL ADMIXTURE**

First Draft

Serge BAHUCHET

Museum national d'Histoire naturelle, Paris

bahuchet@mnhn.fr

INTRODUCTION

The aim of this paper is first to point out the diversity of the situations, thus resulting from various historical processes. There is not one single type of « Pygmy » group, nor an archetype of relationship between « the » Pygmies and « the » Farmers – there is even not a typical community of farmers ! The history is complex, and much rich. Second, this paper will underline the great gaps in the available documentation.

Artificially created by European travellers during the XIX^e century (Schweinfurth 1873), the blanket term *Pygmy* appears to be a somehow misleading category covering different entities, used to designate any kind of rainforest people with a short stature and a nomadic lifestyle. This term covers artificially a mixture of scattered ethnic groups living in Central Africa (Bahuchet 1991, Seitz 1993) (Table 1, Fig. 1). The use of the name « Pygmies » has the consequence that similarities are inferred even when no information at all exists about a group - it is still a question if such a community really exists, because of the uge heterogeneity of the societies called Pygmies.

Heterogeneity occurs on three topics: socio-economics, linguistics, relationships with non-foragers neighbors.

Socio-economics: Considered as « rain forest hunter-gatherers », which is true for the majority, some « Pygmy » groups live in savannah, others are fishermen in swamps, some are potters, others are « farmers ». Differences in way of life and in mobility (nomadization or simply seasonal mobility), style of habitat (nomadic huts or settled villages with square houses), and differences in technics and tools are uge. This is without looking at the local modern changes towards adoption of agrioculture.

Linguistics: There is no « Pygmy language family » and all Pygmy languages are related to languages spoken by non Pygmy populations ; thus there are as many languages as groups, and an important linguistic diversity. This will be the subject of this paper.

Relationship with neighbors: More than any other hunter-gatherer societies in the world, African rainforest foragers are best characterized by their mode of relations with the neighboring societies ; economic exchanges are important in daily life, connected to complex forms of social dependency, showing a large range from vague commercial association to subordination.

Nevertheless, « Pygmies » are everywhere considered as different from and by the other central African populations, called « farmers », as they show considerable differences, both physical (body size and proportions) and cultural (habitat, clothing, tools, techniques, sometimes music...).

This raises a paradox of linguistic assimilation, that of language shift *without* cultural admixture and merging: despite the linguistic relatedness between foragers and farmers, despite the fact that their economy became intimately connected with those of other peoples, Pygmies have not merged into farmers' societies, but have maintained their own identities. Thus, cultural identity without linguistic autonomy is the main characteristics of the Pygmy populations.

In this paper, I will not discuss the socio-economic heterogeneity of the Pygmies, but concentrate on the linguistics diversity. Starting from the present situation, this paper will present the linguistic status of Pygmy languages, then the sociolinguistical context and the contact with farmers, and finally discuss some historical questions and propose some interpretations of the past.

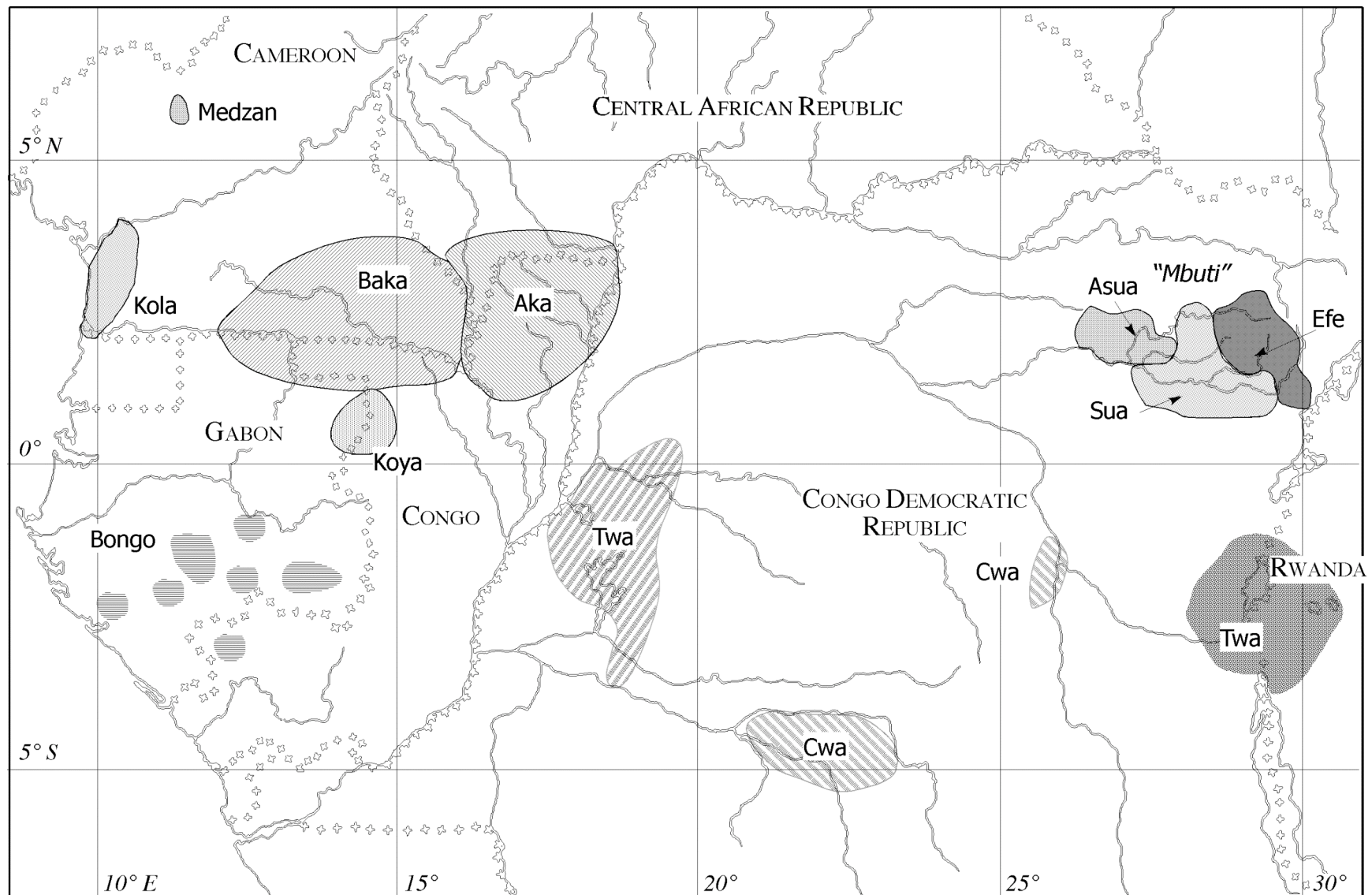
This paper will only bring a piece towards an answer of the main question: what, if something, do have in common all the so-called Pygmy populations? Other data and other fields of knowledge will be necessary for finally answer to it.

Table 1 – Terminology of Pygmy groups

From west to east, from the Atlantic coast to the eastern Congo Basin :

Name	Pays	Other names, synonymes	Ecosystem	Main references
Kola	Cameroon (SW)	BaKola, BaGyeli, Gyeli	Rainforest	Joiris 1994; Koppert, et al. 1997; Loung 1959, 1996; Ngima Mawoung 1996
Bongo	Gabon (central and south)	Akoa, BaBongo, Barimba	Rainforest ; savannahs margins	Andersson 1983; Knight 2003
Medzan	Cameroon (central)	Tikar Pygmies, Pygmées Tikar	Rainforest ; savannahs margins	Leclerc 1999; Mebenga Tamba 1998
Baka	Cameroon (east), Congo (NE), Gabon (N)	Bangombe, Bibayak, Babinga	Rainforest	Joiris 1998; Leclerc 2001; Sato 1992; Tsuru 1998; Vallois and Marquer 1976
Koya	Border Gabon-Congo	BaKoya, BaKola	Rainforest	Tilquin 1997
MiKaya	Congo (N)	Bambenga	Rainforest	
Aka	CAR, Congo (N)	BaAka, Bayaka, Biaka, Babinga, Bambenga, BaMbenzele (dialect and western groups)	Rainforest	Arom 1987; Bahuchet 1985; Demesse 1980; Hewlett 1991; Kitanishi 1995 ; Lewis 2002
Twa	CDR (Equateur)	BaTwa, Konda Twa	Rainforest, swamps	Elshout 1963; Pagezy 1986, 1988; Schultz 1986; Sulzmann 1986
Cwa	CDR (S)	Kuba Cwa, Batwa, Twa des Kuba, Twa des Luba	Savannahs	Kazadi 1981
Asua	CDR (Ituri)	Bambuti, Mbuti Asua, Akka, Tikki-tikki	Rainforest	Schebesta 1952
Sua	CDR (Ituri)	Bambuti, BaSua, Kango	Rainforest	Harako 1981; Hart and Hart 1986; Ichikawa 1978; Tanno 1976; Turnbull 1965a
Efe	CDR (Ituri)	Bambuti	Rainforest	Bailey 1991; Bailey and Peacock 1988; Demolin 1993; Terashima 1983,1985
Twa	Rwanda, Burundi	Batwa	Savannahs, mountains	Lewis and Knight 1996

Congo : Congo-Brazzaville; CAR: Central African Republic; CDR : Congo Democratic Republic (ex-Zaire)

Fig. 1 : General map

PRELIMINARY CONSIDERATIONS

List of groups and terminology

What is a « Pygmy group »? This question can look odd, however this European category fit uneasily with the local realities. What do we take into account? The affirmation of the foreign observers, or the self designation by people? Shall we trust ethnonymes, like the Bambote of Congo savannah, as described by Terashima (1980), which are hunter gatherers but not « Pygmies » ? Do we stop at the edge of the rainforest, or not ? And why separate these people from the other Central African populations ? Who shall we compare with who ?

Besides, there is a real problem in the terminology. In the litterature, we find many names. Some are classical ones, like Bambuti or Babinga, but obviously of colonial origin. It is not simple to find his way in the mixing of names, some being true ethnonymes (e. g. Baka), other are names given by the farmers (e. g. Bambuti), other are local dialectal groups (e. g. Bambenzele, dialect of Aka) – without forgetting the problem of Bantu names, with or without the plural prefix (e. g. Kola or BaKola). I give here a list of the main known synonyms (Table 1).

Caution : quality of available data

Linguistic studies

Strikingly enough, linguistic studies of Pygmies are much less readily available than ethnographic ones. The majority of the languages are not described or merely documented, exceptions being the Efe (Vorbichler 1965; Vorbichler and Brandl 1979), Kola (Renaud 1976), Aka (Cloarec-Heiss and Thomas 1978; Thomas 1991 ; Thomas et al. 1981) and Baka (Brisson 1984, 1999; Brisson and Boursier 1979; Kilian-Hatz 1989). For some groups, short lists of vocabulary are available, but often in old travel accounts without phonetic transcription. For some other groups there are only indications, and field surveys are still necessary. Thus, comparisons are not possible because of the lack of data.

Census and demographic data

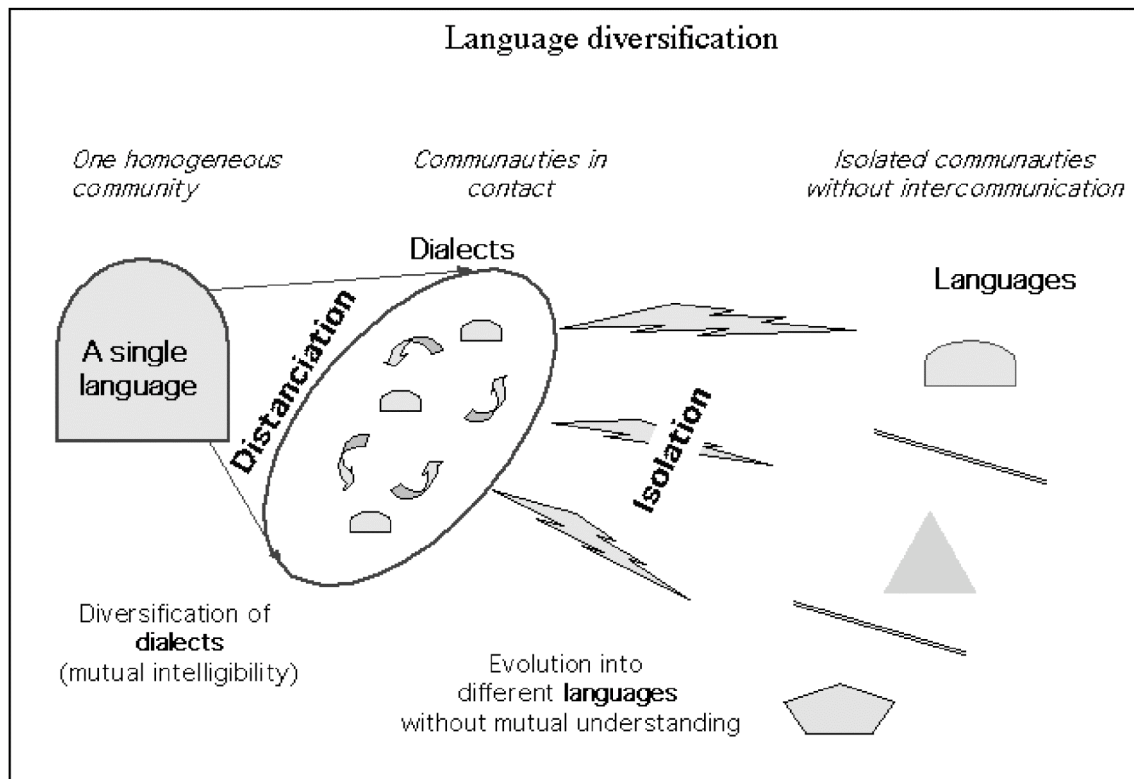
Very few groups were subject of precise or merely reliable census (mainly Medzan and Kola Pygmies in Cameroon). Sometimes for transborder groups (Baka) census is available for a country, not for another. For the majority of the groups, they are only rough estimations given by fieldworkers. Even more for some groups, census are not available: these are the various Cwa-Twa groups from Central CDR, Eastern CDR and Rwanda, the last aving much suffered during the 1995 Rwanda Civil War (Lewis & Knight 1996).

Definition : language vs dialect

Dialects are forms of speech that are mutually intelligible, the major differences are phonetics ; languages are not mutually intelligible without learning, showing lexical as well as structural differences. The drift of a language into various dialects is gradual, following increasing isolation of the groups of speakers (Fig. 2). When the communicative isolation increases during a sufficient period of time, dialects diverge

and the intercomprehension stops. Then daughter languages have emerged (Nichols 1997; Ruhlen 1991).

Fig. 2. Model of language diversification



In the case of the various Pygmy groups, we face processes both of language shift *and* of language diversification. Occasionally, the linguistic history of the Pygmy groups also provides us examples of the process of language death (*cf.* Mufwene 2004).

DIVERSITY OF PYGMY LANGUAGES

The status of the Pygmy languages

There is no "Pygmy linguistic family", everywhere all pygmy languages are related to languages spoken by non pygmy populations. All the tongues spoken by Pygmy groups are clearly related to other African languages, belonging to the two *phyla* of Central Africa: Niger-Kordofanian and Nilo-Saharan.

The linguistic situation among Pygmy populations shows definitely a *strong heterogeneity*. I could recognize in the litterature a minimum of 17 different ethnolinguistic groups called Pygmies, distributed as follow (Table 2 and Annex 1):

(Table 2)

Phylum	Stock	Family	Number
Niger-Kordofanian	Niger-Congo	Adamawa-Ubangian	1
		Bantoid non-bantu	1
		Northwest Bantu	8
		Central Bantu	5
Nilo-Saharan	Central Sudanic	Mangbetu-Asua	1
		Mangbutu-Efe	1

Comparing to the languages of the farmers, Pygmy tongues go from identity to separate languages, even though majority are dialects:

- One Pygmy language is *identical* to a language of farmers, showing no variation: Efe (CDR; Central Sudanic, similar to Lese).
- Majority of the Pygmy tongues are *dialects*, that is to say variants of languages spoken by farmers. Degree of dissimilarity is variable.
- Three Pygmy languages are obviously *different* from any other language spoken by farmers, that is to say that they are languages and not dialects: Aka (CAR-Congo, Bantu), Baka (Cameroon, Ubangian), and Asua (CDR, Central Sudanic).

Size of the groups, density and social organisation

Strong contrast exist in the size of the Pygmy populations, and in the area they occupy as well as in the presentday spatial organisation (Table 3, Fig. 3).

Table 3 – Linguistic context of the main Pygmy populations

Name	Country	Population size	Area (km ²)	Linguistic surroundings: nb farmers in contact
Medzan	Cameroon	400	1,200	1 (2 dialects)
Kola	Cameroon	4,000	12,000	9 languages
Bongo (central)	Gabon	2,000	7,500	5 languages
Bongo (Southern)	Gabon	1,000	2,000	5 languages
Koya	Gabon, Congo	2,600	9,000	4 languages
Baka	Cameroon, Gabon, Congo	30-40,000	75,000	18 languages
Aka	CAR, Congo	30-50,000	70,000	19 languages
Asua	East CDR	10,000?	15,000	8 languages
Sua/Mbuti	CDR	26,000?	30,000	9 languages
Efe	CDR	10,000?	20,000	6? languages

Sources : Censuses are lacking for almost all groups; estimations are tentatively drawn from the various papers listed above and from Lee and Daly (1999). Estimates of areas occupied are either drawn from the sources cited or calculated here based on maps. Linguistic surroundings are estimated from the sources cited and from regional linguistical maps (mainly ALAC 1983a; 1983b; 1984; 1987; LSNBB 1956).

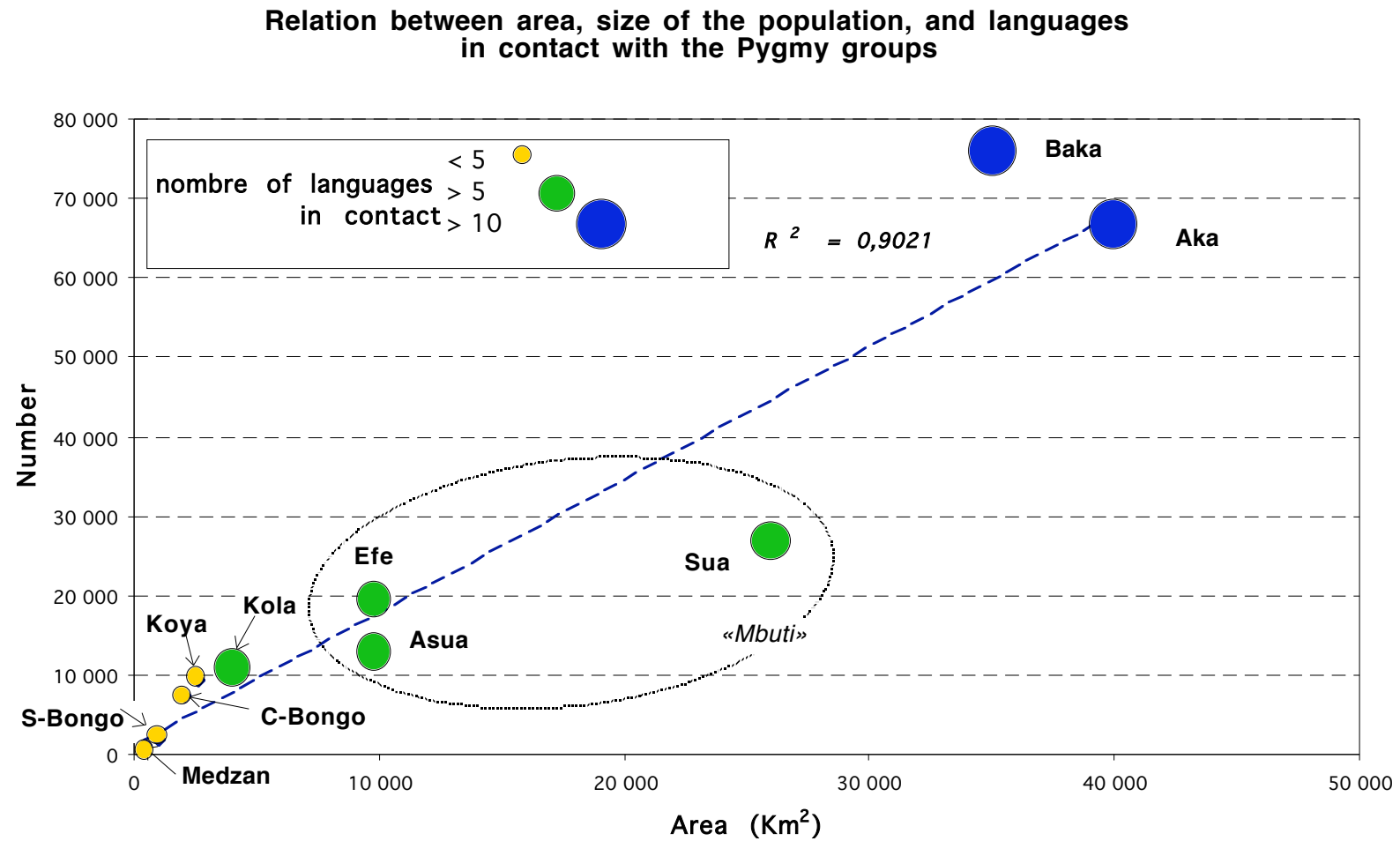


Fig. 3. Relation between area, size of the population and languages in contact with the Pygmy groups

The ethnolinguistic groups with the larger areas are also the most mobile (Aka, Asua, Baka, Efe, Sua). Asua, Sua and Efe are usually included under the covering name *Mbuti* or *BaMbuti*. These are the most famous groups, and have been the focus of the majority of the publications, corresponding to the « classical » image of semi-nomadic hunter-gatherers: they live in temporary camps with domed huts, while exchanging regularly with the neighbouring farmers. Their way of life is the most forest-oriented. Strong social ties are necessary to maintain linguistic unity and cultural identity, while being dispersed over large areas and in contact with many other cultural entities. Indeed, scattering usually induces diversification and development of dialects. And actually, dialects have been described for some of these languages.

Mbenzele is the western dialect of Aka; Bangombe is the eastern dialect of Baka; Kango is the southern dialect of Sua.

Such large population sizes obviously also raise the question whether they result from a demic expansion, and if so, since when.

The other groups show a different socio-economic situation: they live in settled villages and practice a more or less efficient agriculture, while maintaining relations with neighbouring farmers. Although they appear less distinct from farmers on cultural (and even physical) grounds, than the preceding groups, farmers always distinguish these groups as different from themselves, and categorize them differently. Documentation of these « peripheral » groups, smaller in demography and less mobile, is much less abundant, and found mainly in a few papers or reports. Some groups live in the rainforest; they are: the *Kola*, the *Bongo*, the *Koya*, and the *Twa*. Others, poorly known, live in the savannahs at the periphery of the forest basin: the *Medzan*, several groups named *Cwa* (read « Tshwa ») and a scattered group known under the name of *Twa*, in Rwanda and Burundi.

To sum up, larger areas are occupied by mobile hunter-gatherers, meanwhile semi-settled groups use smaller ranges. It is also striking that all the three Pygmy groups speaking a individualized language (Aka, Asua, Baka) are among those with the larger range, while all the other speak dialects.

SOCIO-LINGUISTICS AND CONTACT OF LANGUAGES

Congo Basin as a pluriethnic settings

Here the complexity of the « Human landscape » of the Congo Basin has to be summarized. Central Africa is a cultural and linguistic medley of some 200 different populations, with different languages, social organization, cultural settings and histories (Joiris and Bahuchet 1994).

Throughout the Congo basin, the majority of the farmers' ethnic groups (53 %) do not currently interact with Pygmy groups. The other have some kind of relationship with hunter-gatherer groups, which are disseminated in the middle of these ethnolinguistic communities of farmers, some being linguistically related with them, many of them not at all. We can use for them the concept of « encapsulated foragers » that Woodburn (1988) introduced for the situation of African minorities in contact with other tribes.

It must be underlined that in the regions where farmers and Pygmies do share the same territories, not all the families in a single village have the option of associating with the Pygmies.

Linguistic contacts between Pygmies and farmers

Every single Pygmy ethnolinguistic group lives in contact and association with several groups of farmers speaking different languages. The number of languages of farmers with which an ethnolinguistic group of foragers is in contact is proportional to the area occupied by the group, and with the size of the Pygmy population. In other words, the smaller the group, the fewer languages with which it is in contact (Fig. 3).

Conversely, the larger the Pygmy group, the larger the occupied area is and the greater the linguistic heterogeneity of associated farmers. For instance, the linguistic surroundings of the Medzan are much more homogeneous than for the Kola.

The linguistic affinity between the farmers and the Pygmies with whom they are associated is very variable. It reflects different histories, and leads to different attitudes, despite a global pattern.

Actually, the distinct Pygmy ethnolinguistic groups are not necessarily related to languages of farmers with whom they currently live in proximity. Conversely, all the farmers presently associated with Pygmy groups do not necessarily speak a language related to that spoken by the Pygmies.

For instance, the Aka as an ethnic group is dispersed over a large area that is shared by 19 different groups of farmers, and only 6 of them speak languages related to the Bantu language spoken by the Aka (C10). Such situations are mainly due to the large areas occupied by the Pygmy group in question. In such cases, many Pygmy camps or communities live in association with farmers whose languages are not related to theirs.

Concentrating on the more documented Pygmy groups, representing 9 different tongues, we found that they are in contact with a total of 73 different languages spoken by farmers. Only 9 of these are *directly* related to the Pygmy languages (either full languages or dialects); another 34 languages belong to the same linguistic groups. The other 30 languages are from different linguistic groups. This means that these 30 groups of farmers are in contact with Pygmies *that share no common linguistic history with them*.

(Table 4)

9 Pygmy tongues	<i>in contact with</i>	73 languages spoken by farmers including :
		- 9 directly related,
		- 34 from the same linguistic group,
		- 30 without any linguistic filiation, with the Pygmy tongues.

As a consequence of the plurilinguistic environment, Pygmy communities are plurilingual. Plurilingualism is indeed the main strategic tool for contact with the various farmers which surround the groups of foragers. Being multilingual, they use nevertheless their own mother tongue inside their communities.

From sociolinguistics to geolinguistics

Spatially, the linguistically different farmer groups who live in day-to-day relationships with Pygmy groups, present three different situations:

- Some farmers are linguistically related to the Pygmies with whom they are presently associated. These represent a minority of cases.
E. g. the Lese with the Efe (Sudanic), the Bongom with the Koya (Bantu B20), or the Ngando with the Aka (Bantu C10).
- Some are linguistically related with Pygmies which presently live very far away.
These include the Maka (Bantu A80) from S-E Cameroon, whose language is related to that of the Kola of coastal Cameroon (400 km distant); and the Ngbaka (Ubangian) from southern CAR, whose language is related to that of the Baka in southeastern Cameroon (500 km distant).
- Others, 30 groups, show no linguistic relation at all with any Pygmy groups.
E. g., the Beti and Fang (Bantu A70), associated either with the Kola (A80) or with the Baka (Ubangian), or the Bangandu (Ubangian, gbaya group), associated with the Baka (Ubangian, gbanzili group).

Finally, some ten groups of farmers which are located on the border of two different Pygmy groups, can be in contact simultaneously with these two groups.

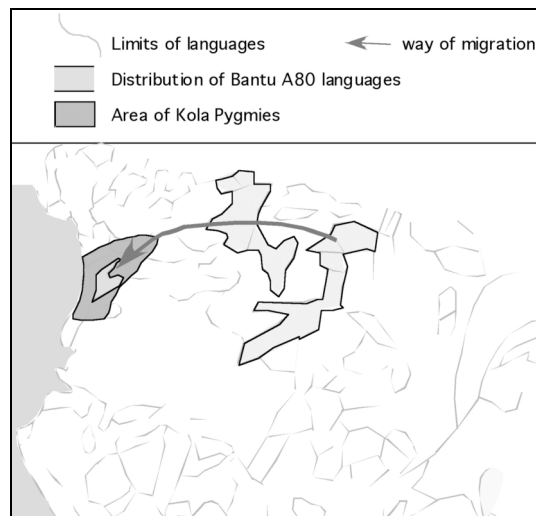
That is the case along the Sangha River, where some Mpiemo, Bomoali or Yangere are associated with the Baka on the right bank, and others are associated with the Aka-Mbenzele on the left bank. This is also the case in Ituri, where some Ndaka and Liko live with Asua Pygmies, while others live with Sua. Similarly, the majority of Lese are associated with Efe but some are with Sua Pygmies.

This shows that the association between some group of foragers and some group of farmers, leading to a language shift for the foragers, could have been subsequently broken, and changed to a new association with other foragers.

For instance, the Maka which are linguistically related to the Kola, are presently associated with the Baka.

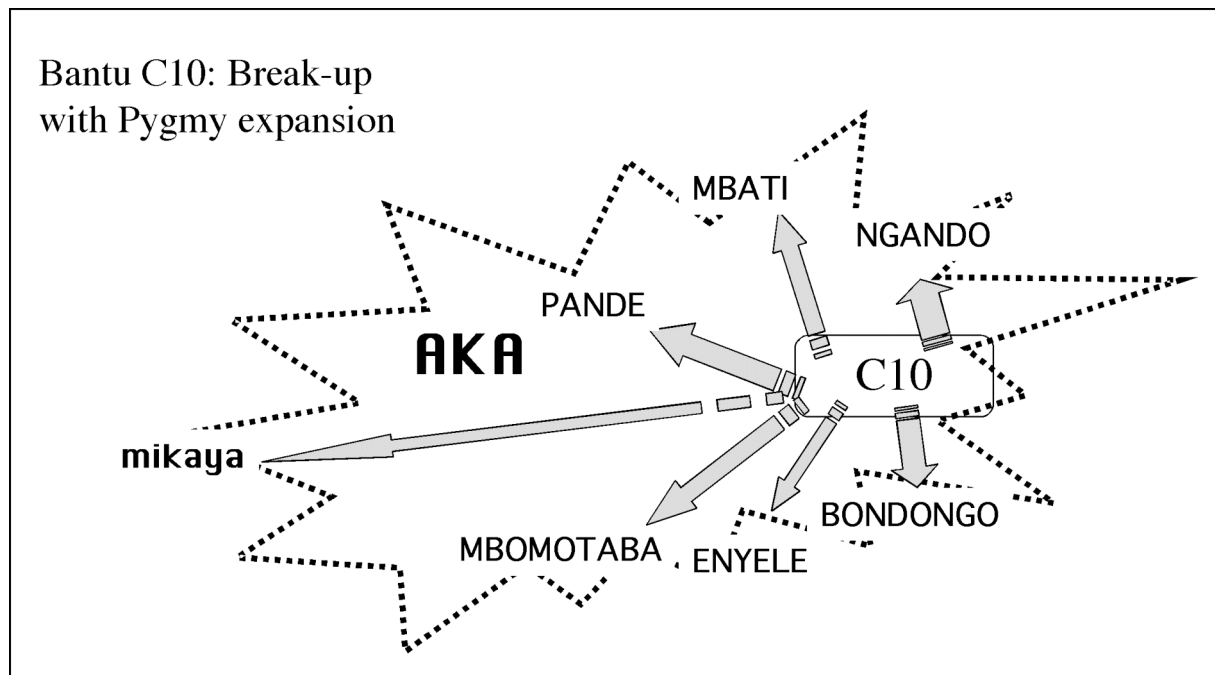
The dispersion of the related languages, being spoken by foragers as well as by farmers, indicates migrations.

The better examples are the A80 languages including the Kola Pygmies, distributed in the south-east and the South-west Cameroon (Fig. 4), and the Gbanzili-Sere Ubangian languages, including the Baka Pygmies, which are dispersed from Southern Sudan to South-east Cameroon (Fig. 5).

Fig. 4 - Map of migration of Bantu A80 languages**Fig. 5 - Map of migration of Gbanzili-sere languages (Ubangian)**

Comparing the area covered by the various languages of the same family, including foragers, can be striking.

12 different languages compose the Bantu C10 group, including Aka Pygmies. For the majority, each ethnolinguistic group of farmers counts less than 6,000 people, and occupies small territories. At the opposite, the range occupied by Aka encompasses all the groups of farmers, even more as its includes also non C10 speaking farmers. This fact suggests a fragmentation of the « proto-C10 » farmers but an expansion of the C10 hunter-gatherers (Fig. 6).

Fig. 6 - Diversification of Bantu C10 languages

Successive phases of relations with farmers

Three groups have developed an autonomous language (Aka, Asua, Baka). The successive phases are the following :

- a period of intimacy between hunter-gatherers and farmers, leading to the language shift for the hunter-gatherers ;
- a period of spatial distancing during which languages diversified in various dialects, hunter-gatherers among the others ;
- growing isolation leads to diversification of languages without mutual understanding.

This is an universal process. What is particular to the Pygmies, is the fact that during the phases of spatial distancing with the linguistically related farmers, they tied new relations *with other farmers*. However, with these farmers, there are no tendency at all to a new language shift. The most explicit situation is that of the Baka, because the spatial distance with the linguistically related farmers is obvious (more than 800 km).

We must then consider that the sociological context during the period of linguistic shift is *different* from the present-day context of contacts without linguistic borrowing.

Internal homogeneity or heterogeneity among groups

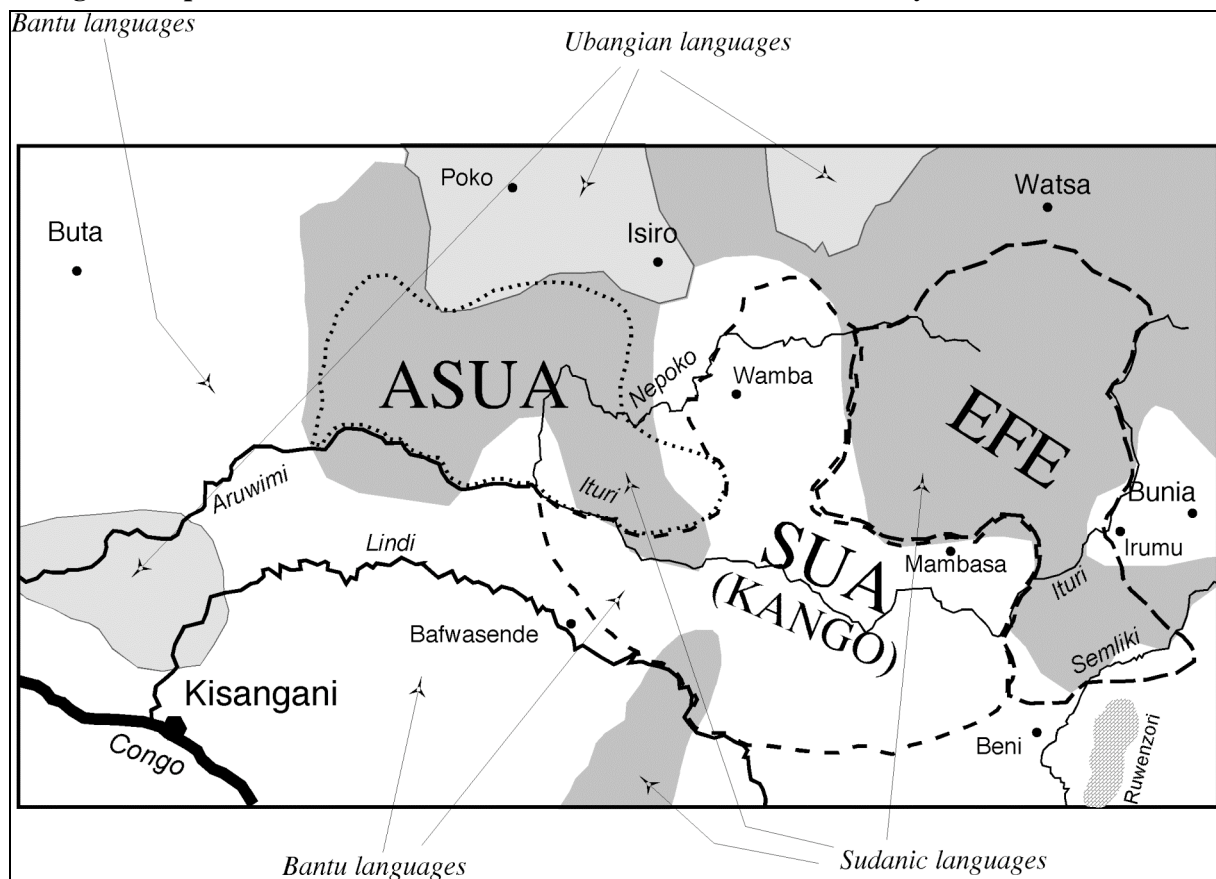
The question of the divergence between sub-groups inside the same ethnolinguistic community, or at the reverse the persistence of a linguistic and social community can be illustrated by two extreme examples, the « Mbuti » in Eastern Congo, and the Bongo of Gabon.

In other words, the question is if it is possible to understand the conditions, in term of size of the social group, either in number or in occupied area, for persistence of a Pygmy linguistic identity facing the farmers languages.

« Mbuti » of Congo

Ethnographic monographs show the cultural similarities between the various groups composing the « Mbuti » complex, Asua, Efe, Sua and some other subgroups like Kango (dialect of Sua) (cf. Bailey 1991, Ichikawa 1978, Schebesta 1952, Turnbull 1965a...), even if some differences gave rise to discussion, like the classical distinction between Efe archers and Mbuti (i. e. Sua, Bantu speaking group) net hunters (Turnbull 1965b) or the size of the groups (Terashima 1985). Usually the Asua, less documented, are not included into the comparisons. The music also shows real similarities (Demolin and Bahuchet 1990a). This cultural pattern is not reflected in the linguistic pattern, as we already explained that 3 different languages are spoken, one Bantu and two Sudanic, from two different families. However the actual interethnic relations between Mbuti groups are not documented, including the origins of the spouses. So « Mbuti » represent a somehow cultural community, with an ethnolinguistic heterogeneous feature (Fig. 7).

Fig. 7 - Map of Ituri (from Demolin and Bahuchet 1990b, Tucker and Bryan 1956, LSNBB 1956)



Altogether, « Mbuti » count more than 50,000 people, covering a huge territory of 85,000 km², which is larger than territories and number of Aka or Baka Pygmies. The hypothesis here is that the spatial and demographic expansion of the « Mbuti » did not allow to maintain the internal coherence of the society and the persistence of a single language, then leading to the split of this Pygmy people into three different linguistic communities, with different language shift. One can wonder if some kind of demographic disproportion between various ethnolinguistic groups of farmers could explain why Mbuti shift to one language better than another, for instance Bila vs Ndaka (Bantu D30) or Lese vs Mamvu (Sudanic).

Bongo of Gabon

« Bongo » (central Gabon) offer a case of fragmentation of a community. This term covers a wide range of foraging peoples dispersed in discontinuous regions, in more than 20 localities (Knight 2003; Annaud and Leclerc 2002).

Bongo as a whole, have a very low population, less than 4,000 people, living in a large number of small hamlets, very dispersed, but much linked to the neighboring farmers. They all bear the same ethnonym, Bongo, but at least 3 different Bantu languages are spoken: a dialect of Tsogho (B30), of Kaningi (B60) and of Teke (B70) (Table 5).

Table 5 - Languages in contact with the Bongo

Region	Bongo languages	Associated farmers and Language group
Central region	Dialect of Tsogho (B30)	Akele (B20) ? Tsogho (B30) Simba (B30) ? Sango (B40) Sira (B40) ?
South-eastern	Dialect of Kaningi (B60)	Akele (B20) Kaningi (B60) Teke (B70) Wumbu (B70)
	Dialect of Teke (B70)	Obamba (B60) Teke (B70)

Because Bongo settlements are dispersed in the middle of pluriethnic regions (at least nine farming groups are associated with them)¹, they have to communicate with different farmers, and possibly between different Bongo communities. We still do not know what language the Bongo use in communication between various groups. The available documentation does not allow to know the social interactions, if any, between the disperses micro-groups (e. g. contacts, visits, exchanges of spouses...), neither the cultural similarities (e. g. technical vocabularies, ritual systems, music...).

The only group which occupies a continuous area is located in the central Gabon, and counts some 1400 individuals. The other groups range between 80 to 300 persons, with an average of 170 individuals, and they all are distant of minimum 80 km.

We suspect that the small size of the community and the surrounding by farmers did not permit to maintain the communication between subgroups and then the cohesion of the society, and subsequently provoked the fragmentation of the original group and the loss of a common language.

The small size of the settlements, together with the large distances between subgroups, could cause the loss of contact between groups, then have broken social networks necessary for the maintenance of a linguistic identity. Thus, if we follow the « social brain hypothesis » (cf. Dunbar 2004), the average size of a Bongo subgroup which is 170, is less below the supposed size of a tribe of same language, of

¹ B20 (Akele), B30 (Simba, Tsogho), B40 (Sango, Sira), B60 (Kaningi, Obamba), B70 (Teke, Wumbu)

1,500 to 2,000 individuals. It is definitely of prime importance to check what kind of contacts and exchanges of spouses, do exist between all Bongo subgroups; the hypothesis here is that the sedentarization of Bongo by limiting their range, produced the ethnolinguistic fragmentation.

PYGMY LINGUISTIC SUBSTRATUM ?

The question of « the original Pygmy language » will probably stay unsolved for ever. The linguistic integration with farmer languages has been too strong to allow any reconstruction on a large scale. In order to conduct comparisons we need linguistic and lexical data which are still unavailable. Because of the status of borrowed languages, comparative methods are useless; Pygmy languages are so close to farmers' languages that classical methods of historical linguistics do not give convincing results. For instance, when Klieman (2003) used comparative lexicology and glottochronology on Bantu-speaking Pygmy groups (that she calls Batwa), she actually informs us only about Bantu speakers' history and not about "Pygmy" history. Meanwhile she does not take into account non-Bantu speaking Pygmy groups.

The methodology I developed combines ethnographic with ethnolinguistic comparison (Bahuchet 1989). The underlying principle of this type of comparison is that the presence of a similar cultural fact (a tool, a practice...) in two different societies has no historical significance in itself (it could be a simple convergence) unless this fact bears the *same name*; this very similarity indicates either inheritance or loan and diffusion. In any case, it implies some previous *contact* (in space or in time) between the two groups.

Comparing Aka and Baka: looking for historical roots

Aka (Bantu C10) and Baka (Ubangian) are today languages which are not mutually intelligible. Despite minimal interaction between them, they share more than 20% of their vocabulary, covering a broad spectrum of specific topics: 88 % of the common terms belong to a specialized vocabulary (in contrast to 45 % of words in the Baka language as a whole). These specificities led me to the hypothesis that Aka and Baka originated from the same ancestral population (whose name may be reconstructed as **Baakaa*) and their common vocabulary is a remnant of the language that was spoken by both groups *before* they respectively borrowed Bantu and Ubangian languages (Bahuchet 1992).

Important is the fact that the Baka and Aka share more *specialized* vocabulary between them than they do with Bantu or Ubangian languages spoken by farmers around them. Meanwhile, in both cases, Aka and Baka languages share much of their basic vocabulary with the related languages of farmers.

The common vocabulary points to the persistence of a shared economic *substratum* of tools, techniques, forest knowledge and processes of acquisition (75 % of the shared words concern forest vocabulary -flora, fauna, animal behavior...-, tools and techniques). It concerns cultural complexes (*sensu* Sapir 1916), i.e. integrated sets of cultural practices organized around specific rainforest activities, including components of the ecosystem and knowledge of the natural history of the rainforest. 12% of common words are related to society, music, ritual and religion (see Bahuchet 1993a for details).

The historical significance of these elements is important: they suggest an integral Aka and Baka common existence and culture prior to their contact and association with farmers with whom they are linguistically related, *and that they did share a culture that was distinct* from that of the farmers. At this point, the question whether this Pygmy group itself was already associated with other farmers is unsolvable.

The split and the subsequent divergence between the two groups may result from their association with other populations from whom they borrowed most of their present language, after a reasonably long period of close contact: the *Baakaa Pygmy population happened to be divided into two groups following their contact and association with farming groups, Bantu on the one hand, Ubangian on the other. Each *Baakaa sub-group adopted the language of the farmers with whom they lived, in such a way that, many generations later, the sub-groups evolved and became the different ethnic groups that we know today as Aka and Baka.

The language shift has been total, to the extent that the structures are entirely Ubangian for the Baka language, and Bantu for the Aka language. No grammatical uses remain from a previous stage of the language. Lexically speaking, Aka and Baka languages *differ* in 78 % of their respective vocabularies, a figure which is very high. At the cultural level, the influences are much more difficult to discern. Globally, the ancestral culture of the *Baakaa shows few differences in its structure from the present cultures of both Aka and Baka.

While *Baakaa shifted language, they did not merge into the societies from whom they borrowed their new languages. This is most striking because « language shift usually involves an intermediate stage of society-wide bilingualism » (Nichols 1997:366). That means that the phase of bilingualism the *Baakaa lived in the past is sociologically different from their present situation. Nowadays, neither Aka nor Baka tend to shift language in order to adopt any of the languages of their neighbors. This refusal is the result of an attitude of detachment. To keep their mother tongue ensures an intimacy which prevents them from being assimilated into the dominant society of the farmers. They protect themselves thanks to the use of the Aka or Baka language as a « secret language ».

Can we go farther with others groups?

Such a method should be used in the case of Pygmy groups whose cultural identity is clear despite linguistic heterogeneity: for instance the Ituri groups named « Mbuti », or in Gabon the groups named Bongo. It is difficult to apply when there is no lexical similarities, as between Kola and Baka, for instance. However, again, we lack the necessary data for it.

On a regional basis, I suspect that results can be achieved. I am less confident for results while comparing more distant groups, even if I was able to recognize very few common words (only 6) between Mbuti (Eastern Congo Basin), and Aka and Baka languages (in the Western Congo Basin).

Linguistics, and in this case mainly lexicology, will not alone permit to solve the question of a single origin of all Pygmy groups.

EARLY CONTACTS BETWEEN PYGMIES AND FARMERS

We still know very few about the early patterns of language contact of Pygmies with farmers. Archaeology is of no help, mainly because of the scarcity of human remains in the tropical soils.

Oral literature and mythology on the one hand, comparative lexicology on the other, give some indications at the regional level.

Oral literature and history

Ample material exists to demonstrate that Pygmies everywhere have an important presence in the mythology of the farmers, and that they have a somewhat ambiguous nature, being both admired and despised, or even feared (Bahuchet and Guillaume 1982; Kazadi 1981). The oral traditions of many societies of Central Africa grant an important place to “Pygmies”, who are given a quasi supernatural symbolic status, at the border of the human world (Abega 1997; Bahuchet 1993b; Delobea 1989; Sulzmann 1986; Waehle 1986).

Oral traditions of many societies tell that Pygmies were met during the initial migration, they were guides and initiated the farmers to the forest world, including rites, initiations, and specific techniques including some not considered as typical of hunter-gatherers, such as the forging of iron (for the Ngbaka, Arom and Thomas 1974).

Pygmy populations: a case of fragmentation with successive language shifts?

Through these traditions, it seems that the majority of the farmer groups of the Western Congo Basin have had contact with Pygmy groups during at least the last four centuries, but that the Pygmy population was dispersed, since some farmers did not meet them, or met them only while going through particular regions (see Deschamps 1962).

Oral history of many groups of farmers from Cameroon and Gabon give much details about initial contact with Pygmies and then change for another Pygmy group during the migrations. This is also supported by the fact that many groups of farmers distinguish two types of Pygmies, according different phases of their history. In this region, a specific Pygmy group could have changed successively his association with different populations of farmers.

Comparative lexicology

Circumstances of language shift

When it is possible, the careful analysis of the vocabulary shared between Pygmy languages and some farmers delivers precious informations about the conditions of cultural exchanges between the communities. I did it for the *Baakaa and the farmers they met (Bahuchet 1993b). Common vocabulary support the hypothesis that the Farmers were newcomers in the rainforest, meet the Pygmies and learned from them new knowledge and technical skills about this ecosystem. Moreover, sociological lexic push the idea that *Baakaa women married among farmers. This could explain some features of the genetic results. Original contacts between *Baakaa and farmers were full of fear and suspicion, in such a way that Pygmies as forest specialists had a dominant position over the newcomming farmers. Thus Pygmies were granted a specific relation towards the supernatural world, and subjects to gifts in order to create a positive alliance.

Time depth

In the same way, shared vocabularies can give some chronological elements, e. g. names related to ivory trade or American crops. However, scholars are more or less imaginative, and time scale of reconstructed histories vary. For instance, Klieman (2003) begin her reconstruction for western Pygmies at 1500 BC by glottochronology, while by lexical analysis I reluctantly reached only the 15^e century for the separation between Aka and Baka after contact with either Bantu or Ubangian speakers (1993:130).

A Pygmy substratum in farmers' languages ?

This question could only be solved by careful comparative analysis, on very large basis. In any case, this will be very difficult. Because of the quite total disappearance of any previous Pygmy languages, I do not think that any structural specificity could be found. On the other hand, because the so-called farmers are also very brave hunters and skillful gatherers, the similarity in the way of life of all these forest peoples makes their differences very limited; we can only hope to find some lexical borrowing from foragers to farmers. In any case it is necessary to rely with great detail upon both the vocabulary and the cultural activities, mainly tools and techniques, because the technical substratum is more borrowing-resistant.

My study of the Aka, Baka and related languages had two interesting results, of general interest:

- The vocabulary of plants and animals is circulating on a very large basis between languages and linguistic families ; it is very much subject to borrowing, and in no case a simple marker of any foragers' substratum.
- The classic comparative lists (Swadesh type) are useless in the case of language shift: this basic vocabulary is the one which is borrowed the first!

CONCLUSION

Historical linguistics of Pygmy hunter-gatherers is still at its beginning. The first studies show a complex situation, with a very rich and diversified history.

Some incoming genetic studies suggest that Pygmy populations throughout central Africa could issue from the same African stock, though major differences between the groups could be explained by various admixture with other populations (for instance Cavalli-Sforza 1986, Destro-Bisol et al. 2000).

The hypothesis can then be put of an ancestral Pygmy population, which was fragmented by incoming farmers of various linguistic groups. Contact with the farmers and type of association should have been different from the present social situation, because of the language shift without cultural mixing.

To test this hypothesis, it is necessary to connect results from different disciplinary fields: linguistics, together with ethnology, musicology, and genetics. Many data are still missing for the majority of Pygmy groups.

– *Linguistic matters*: majority of Pygmy tongues are not described; records have to be done together with the languages spoken by the neighbors. Of great interest are the specialized vocabularies (technical and ethnobiological) that should be very accurate. The specificity of these languages should benefit from dialectometrical

approach, careful record of the regional variations, including the languages of the neighboring farmers.

- *Ethnographical matters*: we lack correct descriptions for many groups, even among the mostly observed. For instance, we have no ethnographic monographs about the Asua, which are part of the Mbuti ; we have very few informations about the Aka living in the southern part of their range in the Congo swamps. We lack good data for « peripheral » groups, concerning subsistence and way of life, technics and tools, ritual life...
- *Musicological matters*: The study of the music, this « other language », is of great importance: the « classical » Pygmy music, already world wide famous, is based upon complex vocal polyphonies with yoddlé (Arom 1987). However it is shared by some groups, but not by others. Detailed studies are necessary, recording and analysing the various types of songs (repertoires), the social events they support, the construction of the music (rhythm, metrics, melodies, vocal parts...), the musical instruments (cf. Arom and Fourniss 1992, Fourniss and Bahuchet 1995).
- *Sociological matters*: Interactions inside and between diverse Pygmy communities are to be accurately documented. Dialectal variations are linked to the axes of circulation and of spouses exchanges. When groups with differing languages are neighbors, it is necessary to document the relations between them (e. g. for the Bongo, the « Mbuti »). Finally, accurate observations of the relations between the Pygmy groups and their various farming neighbors are necessary, including intermarriage and the place of their metis offsprings.

However, conditions of life in Central Africa are changing very fast, economically and socially, unfortunately not in the better way for the rainforest foragers.

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ANNEXES

Annex 1 – Language groups which include the main Pygmy languages

Annex 2 - Languages in contact with the Main Pygmy Groups, West to East

Annex 1 - Language groups which include the main Pygmy languages in Central Africa*

Pygmy group	PHYLUM	STOCK	FAMILY	GROUP	sub-group	Closest language	Status of the Pygmy tongue
NIGER-KORDOFANIAN							
NIGER-CONGO							
NORTH CENTRAL							
Baka				ADAMAWA-UBANGIAN	Gbanzili-Sere	Ngbaka	<i>Language</i>
SOUTH CENTRAL							
Medzan				BANTOID NON-BANTU	Tikar	Tikar	Dialect
Kola				BANTU, Northwest	A80	Mvumbo	Dialect
Koya					B20	Ungom	Dialect
Bongo					B30	Tsogho	Dialect
Bongo					B60	Kaningi	Dialect
Bongo					B70	Teke	Dialect
Aka					C10	Ngando	<i>Language</i>
Twa					C60	Konda	Dialect
Cwa					C80	Bushong	Dialect
BANTU, Central							
Mbuti/Sua					D30	Bila	Dialect
Twa					J11	Kiga	Dialect
Twa					J60	Rundi	Dialect
Cwa					L30	Luba	Dialect
NILO-SAHARAN							
CENTRAL SUDANIC							
EAST CENTRAL							
Asua				MANGBETU-ASUA		Mangbetu	<i>Language</i>
Efe				MANGBUTU-EFE		Lese	Dialect

*) I follow here the classification of Greenberg (1966) for African languages as revised by Ruhlen (1991), and that of Guthrie (1967-71) for Bantu languages

Annex 2 - Languages in contact with the Main Pygmy Groups, West to East

a) Languages in contact with the Kola			
Pygmy language	Family	Farmer language	family
Kola Two dialects: - gyeli (northern) - kola (southern)	Bantu A80	Mvumbo	A80
		Yasa Batanga	A30
		Basa Bakoko	A40
		Mvae Ewondo Beti	A70

b) Languages in contact with the Baka			
Pygmy language	Family	Farmer language	family
Baka At least two dialects: - baka - bangombe (east)	Ubangian (ngbaka group)	Gbaya Bangandu	Ubangian (gbaya group)
		Yangere	Ubangian (banda group)
		Bulu Fang	Bantu A70
		Maka Njem Bajue Esel Bakwele Konabem Mpiemo Mpompo Bomoali	Bantu A80
		Bakum Pol Kako	Bantu A90
		Kota (Mahongwe)	Bantu B20

c) Languages in contact with the Aka			
Pygmy language	Family	Farmer language	family
Aka At least 2 dialects: - aka (east) - mbenzele (west)	Bantu C10	Ngando Mbati Enyele Bondongo Mbomotaba Bongili Pande	Bantu C10
		Bomoali Mpiemo	Bantu A80
		Pomo Kako	Bantu A90
		Ngbaka Bomasa Monzombo Ngundi	Ubangian (ngbaka group)
		Gbaya Bofi	Ubangian (gbaya group)
		Yangere Mbanza	Ubangian (banda group)

d) Languages in contact with the “Mbuti”			
Pygmy language	Family	Farmer language	family
Efe	Sudanic (mangbutu-eфе group)	Lese (2 dialects: dese, karo) Mamvu Mvuba	Sudanic (mangbutu-eфе)
		Bira Nyali	Bantu D30
		Nande	Bantu J40
Asua	Sudanic (mangbetu group)	Malele Meegye Makere Popoyi Mangbetu Abulu	Sudanic (mangbetu)
		Liko	Bantu D20
		Ndaka	Bantu D30
Sua Possibly two dialects: - sua (northern) - kango (southern)	Bantu D30	Liko Baali	Bantu D20 Bantu D20
		Bila Buduh Ndaka Bombo	Bantu D30 Bantu D30 Bantu D30 Bantu D30
		Mayogo	Ubangian
		Lese	Sudanic (mangbutu-eфе)
		Luumbi	Sudanic (mangbetu)

